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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,763	06/27/2001	Sunil Podar	062891.0526	4857

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EXAMINER	
LEE, ANDREW CHUNG CHEUNG	
ART UNIT	**PAPER NUMBER**
2616	

DATE MAILED: 05/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/893,763	PODAR ET AL.	
	Examiner	Art Unit	
	Andrew C. Lee	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17,19-35 and 37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *37* is/are allowed.

6)☒ Claim(s) *1,19,12,30,17,35,2,20,3,21,4,22,5,23,6,24,7,25* is/are rejected.

7)☒ Claim(s) *8 – 11, 13 –16, 26 – 29, 31 – 34* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 19, 12, 30, 17, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung et al. (US 6765892 B1) in view of Schwartz et al. (US 6421342 B1).

Regarding claims 1, 19, Leung et al. disclose the limitation of a system for managing access to IP multicast traffic (recited "the transmission of IP multicast data in a mobile IP environment" as access to IP multicast traffic, column 3, lines 61 – 62), comprising: a join request manager within an access router (Fig.3, element 309 multicast router; column 5, lines 53– 59), the access router comprising a central processing unit (CPU) (recited "central processing unit (CPU)", Fig. 9, element 1162, column 9, line 10 – 13), and a memory unit (recited " memory", Fig. 9, element 1162, column 9, line 26), and operable to replicate multicast traffic flows for communication to one or more user devices within user systems coupled to the access router using a link (recited "multicast data packets must be replicated for transmission to multiple receivers" as operable to replicate multicast traffic flows for communication to one or more user devices, Fig. 3, column 5, lines 53 – 67), the join request manager operable to: receive a request to receive a multicast traffic flow, the request being received from one of the user devices within one of the user systems (recited " in response to receiving the joint IGMP report" as receive a request to receive a multicast traffic flow, column 5, lines 57 – 64); and

Leung et al. do not disclose expressly denying the request if a system metric is above a threshold by dropping one or more packets containing the request. Schwartz et al. disclose the limitation of denying the request if a system metric is above a threshold (recited "notifying an input port module that it is not able to receive and enqueue a meta-data packet request" as denying the request", column 12, lines 22 – 24; "operational status information for each output port" as system metric, column 2, lines 61, column 12, lines 42 – 53; " above a predetermined threshold" as above threshold, column 12, line 21) by dropping one or more packets containing the request (recited " discard the packet associated with the meta-data packet enqueue request" as dropping one or more packets containing the request, column 12, lines 26 – 27; column 12, lines 9 – 27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leung et al. to include denying the request if a system metric is above a threshold by dropping one or more packets containing the request such as that taught by Schwartz et al. in order to provide a new and improved switching node providing for the efficient use of the switching fabric interconnecting input and output ports that is characteristic of a switching node that provides for output-queueing of packets transferred by the switch node, while avoiding the quadratic increase in packet queues, relative to increasing numbers of input/output ports (as suggested by Schwartz et al., see column 2, lines 21 – 27).

Regarding claims 12, 30, Leung et al. disclose the limitation of the system of claimed wherein the system metric is an aggregate multicast bandwidth over a link coupling, the user system to the access router (recited "encapsulate the packet for both mobiles nodes" as an aggregate multicast bandwidth over a link, Fig. 3, column 6, lines 6 – 20).

Regarding claims 17, 35, Leung et al. disclose the limitation of the system of claimed wherein the request is an Internet group management protocol (IGMP) join request (recited "Internet group management protocol (IGMP)", column 2, lines 54 – 61).

3. Claims 2, 20, 3, 21, 4,22, 5, 23, 6, 24, 7, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung et al. (US 6765892 B1) and Schwartz et al. (US 6421342 B1) as applied to claims 1, 9 above, and further in view of Sipple et al. (US 6405327 B1).

Regarding claims 2, 20, Leung et al. disclose the limitation of a system for managing access to IP multicast traffic (recited "the transmission of IP multicast data in a mobile IP environment" as access to IP multicast traffic, column 3, lines 61 – 62), Schwartz et al. disclose the limitation of a system metric (recited "operational status information for each output port" as system metric, column 2, lines 61, column 12, lines 42 – 53). Leung et al. and Schwartz et al. do not disclose expressly the system of claimed wherein the system metric is the utilization of the CPU. Sipple et al. disclose the limitation of the system of claimed wherein the system metric is the utilization of the CPU (recited "processor utilization" as utilization of the CPU, Fig. 6, element 1110, processor utilization, column 3, lines 18 – 26). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leung et al. and Schwartz et al. to include the system of claimed wherein the system metric is the utilization of the CPU such as that taught by Sipple et al. in order to provide resource efficient means for monitoring the performance of various portions of a computer system (as suggested by Sipple et al., see column 1, lines 9 – 11).

Regarding claims 3, 21, Leung et al. disclose the limitation of a system for managing access to IP multicast traffic (recited "the transmission of IP multicast data in a mobile IP environment" as access to IP multicast traffic, column 3, lines 61 – 62), Schwartz et al. disclose the limitation of a system metric (recited "operational status information for each output port" as system metric, column 2, lines 61, column 12, lines 42 – 53). Leung et al. and Schwartz et al. do not disclose expressly the system of claimed wherein the utilization of the CPU is measured in terms of a percentage of a maximum processing capacity of the CPU. Sipple et al. disclose the limitation of the system of claimed wherein the utilization of the CPU is measured in terms of a percentage of a maximum processing capacity of the CPU (recited "processor utilization" as utilization of the CPU, Fig. 6, element 1110, processor utilization, column 3, lines 18 – 26; recited "utilization reaching the 100 percent performance" as a percentage of a maximum processing capacity of the CPU, column 6, 19 – 29). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leung et al. and Schwartz et al. to include the system of claimed wherein the utilization of the CPU is measured in terms of a percentage of a maximum processing capacity of the CPU such as that taught by Sipple et al. to provide resource efficient means for monitoring the performance of various portions of a computer system (as suggested by Sipple et al., see column 1, lines 9 – 11).

Regarding claims 4, 22, Leung et al. disclose the limitation of a system for managing access to IP multicast traffic (recited "the transmission of IP multicast data in a mobile IP environment" as access to IP multicast traffic, column 3, lines 61 – 62), Schwartz et al. disclose the limitation of a system metric (recited "operational status information for each output port" as system metric, column 2, lines 61, column 12, lines 42 – 53). Leung et al. and Schwartz et al. do

not disclose expressly the system of claimed wherein utilization of the CPU above the threshold impairs operation of the access router. Sipple et al. disclose the limitation of the system of claimed wherein utilization of the CPU above the threshold impairs operation of the processing system (recited "displaying on a computer operator console summarizing any warning and/or actual performance problems detected" as utilization of the CPU above the threshold impairs operation of the processing system, column 6, lines 19 – 35). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leung et al. and Schwartz et al. to include the system of claimed wherein utilization of the CPU above the threshold impairs operation of the access router such as that taught by Sipple et al. in order to provide resource efficient means for monitoring the performance of various portions of a computer system (as suggested by Sipple et al., see column 1, lines 9 – 11).

Regarding claims 5, 23, Leung et al. disclose the limitation of a system for managing access to IP multicast traffic (recited "the transmission of IP multicast data in a mobile IP environment" as access to IP multicast traffic, column 3, lines 61 – 62), Schwartz et al. disclose the limitation of a system metric (recited "operational status information for each output port" as system metric, column 2, lines 61, column 12, lines 42 – 53). Leung et al. and Schwartz et al. do not disclose expressly the system of claimed wherein the system metric is the usage of the memory unit. Sipple et al. disclose the limitation of the system of claimed wherein the system metric is the usage of the memory unit (recited "memory utilization" as usage of the memory unit, Fig. 6, element 1106, column 7, lines 38 – 48). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leung et al. and Schwartz et al. to include the system of claimed wherein the system metric is the usage of the memory unit

such as that taught by Sipple et al. in order to provide resource efficient means for monitoring the performance of various portions of a computer system (as suggested by Sipple et al., see column 1, lines 9 – 11).

Regarding claims 6, 24, Leung et al. disclose the limitation of a system for managing access to IP multicast traffic (recited "the transmission of IP multicast data in a mobile IP environment" as access to IP multicast traffic, column 3, lines 61 – 62), Schwartz et al. disclose the limitation of a system metric (recited "operational status information for each output port" as system metric, column 2, lines 61, column 12, lines 42 – 53). Leung et al. and Schwartz et al. do not disclose expressly the system of claimed wherein the usage of the memory unit is measured in terms of a percentage of a maximum storage capacity of the memory unit. Sipple et al. disclose the limitation of the system of claimed wherein the usage of the memory unit is measured in terms of a percentage of a maximum storage capacity of the memory unit (recited "memory is fully utilized 100 percent" as a percentage of a maximum storage capacity of the memory unit, Fig. 6, element 1106, column 6, lines 38 – 48). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leung et al. and Schwartz et al. to include the system of claimed wherein the usage of the memory unit is measured in terms of a percentage of a maximum storage capacity of the memory unit such as that taught by Sipple et al. in order to provide resource efficient means for monitoring the performance of various portions of a computer system (as suggested by Sipple et al., see column 1, lines 9 – 11).

Regarding claims 7, 25, Leung et al. disclose the limitation of a system for managing access to IP multicast traffic (recited "the transmission of IP multicast data in a mobile IP

environment" as access to IP multicast traffic, column 3, lines 61 – 62), Schwartz et al. disclose the limitation of a system metric (recited "operational status information for each output port" as system metric, column 2, lines 61, column 12, lines 42 – 53). Leung et al. and Schwartz do not disclose expressly the system of claimed wherein usage of the memory unit above the threshold impairs operation of the access router. Sipple et al. disclose the limitation of the system of claimed wherein usage of the memory unit above the threshold impairs operation of the processing system (column 6, lines 59 – 60; column 7, lines 5 – 10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leung et al. and Schwartz et al. to include the system of claimed wherein usage of the memory unit above the threshold impairs operation of the access router such as that taught by Sipple et al. in order to provide resource efficient means for monitoring the performance of various portions of a computer system (as suggested by Sipple et al., see column 1, lines 9 – 11).

Allowable Subject Matter

4. Claim 37 is allowed.

Claims 8 – 11, 13 –16, 26 – 29, 31 – 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

5. Applicant's arguments with respect to claims 1 – 17, 19 – 35 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ACL

May 04, 2006

RICKY Q. NGO
SUPERVISORY PATENT EXAMINER